Addendum No. 2

Date **April 27, 2012**

Project **VA-626A4-11-203 - "Replace Attic AHUs Bldg 6 at the Tennessee Valley Healthcare System, Alvin C. York VA Medical Center, Murfreesboro, TN**

Pinnacle Engineering, Inc. Project No. 11027

The Construction Documents (Specifications and Drawings) are amended as follows.

Mechanical

1. **Drawing 6-M2 is revised and reissued as Rev B to clarify demolition of AHU's condensate drain pans and associated asbestos abatement.**

2. **Drawing 6-M8 is revised and reissued as Rev A to clarify demolition of chilled water piping and abatement of all asbestos containing material on existing piping in attic, chases, tunnels and pump rooms.**

3. **Drawing 6-M9 is revised and reissued as Rev A to clarify New Work required in mechanical chases and reinsulating existing hot water, steam and condensate return piping following asbestos abatement.**

Responses to Questions Received from Contractors during On-Site Walkthrough

1. Per specification section 23 05 93/3.7 under TAB procedures, it specifies that during the test and balance all related system components shall be in full operation. Please clarify how we are to verify the functionality of the existing system components since it is not part of the project scope but is critical to the performance of the system.

   This section requires the contractor to simulate design conditions & operation of variable volume air or water systems for test and balance work. The airside portion of the TAB work shall be accomplished by recording the existing air handling unit's maximum airflow. This CFM value then becomes the maximum airflow setpoint for the new AHU. This setpoint will be defined as an upper limit through the VFD controller. 50% of this upper limit will be set as the lowest operating point. These points of operation will become the points for simulating both heating and cooling modes for Test & Balance reports.

   As a clarification to Section 23 31 00, 3.2, B., the only ductwork required to be pressure tested is new ductwork installed as part of the air handling unit replacement project.

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2. Since we are upsizing the chilled water lines, have flow rate calculations been performed on the existing chilled water loop to ensure the new design requirements to the feeder lines are met? Please advise.

   Existing conditions of primary chilled water loop have been investigated and found to be questionable regarding the ability to provide simultaneous design flows to all buildings served by the chiller plant. Correcting this potential condition, however, is beyond the scope of work for this project. The contractor shall provide the secondary pumps as scheduled and the required piping connections to connect to the primary chilled water loop, with the necessary Test & Balance procedures to verify scheduled flow and head.

3. There is not a specification for Acoustical Ceiling Tiles. Please advise on what is required for the project for repair and replacement.

   The contractor shall remove any existing ceiling tile and support grid necessary for access to work required and shall replace damaged tile and grid with new material to match existing.

4. Due to access restraints to the existing chases, please advise if we are to go back with 3-0 x 7-0 doors to the chases to allow for easier access. If so, please provide a door and hardware specification.

   Access shall be through existing chase access doors observed during on-site walkthrough.

5. Specification Section 23 09 23; please define the "systems" for the DDC Controls.

   The conversion of existing campus-wide building controls from pneumatic controls to Direct Digital Controls is a work-in-progress. This project continues that transition with the control and monitoring points for new air handling units and miscellaneous attic fans identified on drawings. A system server and Engineering Control Center already exist. This project requires the expansion of the existing campus system's hardware, software and communication network as necessary to provide control and monitoring for only the points identified on the drawings.

6. Is there asbestos containing material on chilled water piping to be demo'd and replaced in chases?

   Yes. See Drawings 6-M8 and 6-M9 included in this Addendum. Remove asbestos containing mastic covering insulation on chilled water piping to be replaced, as well as ACM on insulation for remaining hot water, steam and condensate return piping from pump room in the basement to air handling units in the attic. Total estimated quantity is 450 linear feet (chilled water piping). Remove 250 joints, 200 LF and 50 SF of miscellaneous ACM in mechanical room, chase and tunnel on hot water supply and return piping (2-½"ø & 2"ø), steam piping (2"ø) and condensate return piping (1-¼"ø).

END OF ADDENDUM # 2